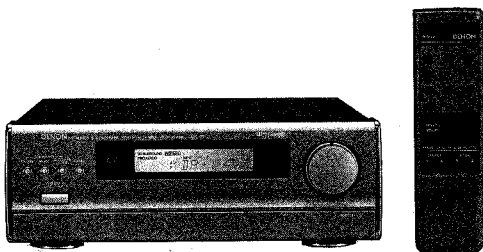


# DENON

Hi-Fi AV Surround Amplifier

## **MODEL AVC-77**

**AV SURROUND AMPLIFIER**



**NIPPON COLUMBIA CO., LTD.**

## SPECIFICATIONS

### • Audio section

**Rated maximum output**  
(All properties shown are only for the power amplifier stage.)

**Frequency response**

**Rated input/input impedance**

**S/N ratio**

**Speaker impedance**

**LINE Input sensitivity/impedance**

**CENTER** (Center 1ch driven)

30 W

(8  $\Omega$ /ohms, 1 kHz with 1.0% THD)

**REAR** (rear 2ch driven)

15 W + 15 W

(8  $\Omega$ /ohms, 1 kHz with 1.0% THD)

40 Hz to 20 kHz  $\pm 3$  dB

150 mV/47 k $\Omega$ /ohms

90 dB

Center: 8  $\Omega$ /ohms

Rear: 8  $\Omega$ /ohms

150 mV/47 k $\Omega$ /ohms

### • Video section

**Input and output level/impedance**

**Frequency response**

1 Vp-p/75  $\Omega$ /ohms

2 Hz to 8 MHz  $\pm 0$ ,  $-3$  dB

### • General

**Power source**

AC 230 V, 50 Hz

**Power consumption**

135 W

**Maximum external dimensions**

270 (W)  $\times$  96 (H)  $\times$  313 (D) mm

(10-5/8"  $\times$  3-25/32"  $\times$  12-21/64")

**Weight**

4.7 kg (10 lbs 6 oz)

### • Remote control unit (RC-178)

**Remote control system**

Infrared pulse

**Number of buttons**

15

**Power supply**

Two DC 1.5V R6P/AA batteries

**Maximum external dimensions**

48 (W)  $\times$  175 (H)  $\times$  18 (D) mm


(1-57/64"  $\times$  6-57/64"  $\times$  45/64")

**Weight**

120g (including batteries) (Approx. 4 oz)

\* Maximum dimensions include controls, jacks, and covers.  
(W) = width, (H) = height, (D) = depth

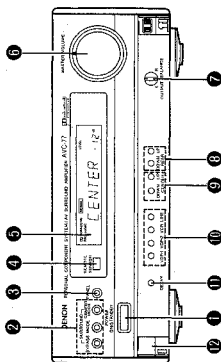
\* Specifications are subject to change without notice.

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## 2 NAMES OF PARTS/BEZEICHNUNG DER TEILE/NOMENCLATURE

(Front Panel/Frontplatte/Panneau avant)



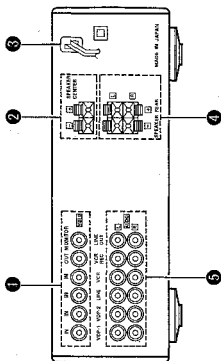
### FOR ENGLISH READERS

- 1 POWER button
- 2 SURROUND select button
- 3 REMOTE CONTROL SENSOR
- 4 MFD (Multi-Function Display)
- 5 MASTER VOLUME control
- 6 OUTPUT BALANCE control
- 7 CENTER channel level button
- 8 FUNCTION button
- 9 DELAY TIME button
- 10 Trip door

### POUR LES LECTEURS FRANÇAIS

- 1 Touche POWER (alimentation)
- 2 Touche de sélection SURROUND (ambiance)
- 3 Touche PANEL (panneau)
- 4 MFD (affichage multi-fonction)
- 5 Commande MASTER VOLUME (volume de la gamme entière)
- 6 Commande OUTPUT BALANCE (équilibrage de sortie)
- 7 Touche CENTER (niveau de canal central)
- 8 Touche FUNCTION (fonction)
- 9 Touche DELAY TIME (temps de retard)
- 10 Trippage

(Rear Panel/Rückseite/Panneau arrière)



### FOR ENGLISH READERS

- 1 VIDEO INPUT/OUTPUT (video input/output)
- 2 VIDEO INPUT/OUTPUT (video input/output)
- 3 VIDEO INPUT/OUTPUT (video input/output)
- 4 VIDEO INPUT/OUTPUT (video input/output)
- 5 VIDEO INPUT/OUTPUT (video input/output)

### POUR LES LECTEURS FRANÇAIS

- 1 Prises VIDEO INPUT/OUTPUT (vidéo/entrée vidéo)
- 2 Prises VIDEO INPUT/OUTPUT (vidéo/entrée vidéo)
- 3 Prises VIDEO INPUT/OUTPUT (vidéo/entrée vidéo)
- 4 Prises VIDEO INPUT/OUTPUT (vidéo/entrée vidéo)
- 5 Prises VIDEO INPUT/OUTPUT (vidéo/entrée vidéo)

### FOR ENGLISH READERS

- 1 VIDEO INPUT/OUTPUT (video input/output)
- 2 VIDEO INPUT/OUTPUT (video input/output)
- 3 VIDEO INPUT/OUTPUT (video input/output)
- 4 VIDEO INPUT/OUTPUT (video input/output)
- 5 VIDEO INPUT/OUTPUT (video input/output)

### POUR LES LECTEURS FRANÇAIS

- 1 Prises VIDEO INPUT/OUTPUT (vidéo/entrée vidéo)
- 2 Prises VIDEO INPUT/OUTPUT (vidéo/entrée vidéo)
- 3 Prises VIDEO INPUT/OUTPUT (vidéo/entrée vidéo)
- 4 Prises VIDEO INPUT/OUTPUT (vidéo/entrée vidéo)
- 5 Prises VIDEO INPUT/OUTPUT (vidéo/entrée vidéo)

- Read this manual carefully to ensure that you take full advantage of all the features of this surround amplifier. Keep the manual in a safe place for future reference.
- Be sure to check that the date of purchase and the store's name of purchase have been filled in properly on the warranty issued at your store of purchase.

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Check that the following parts are included in the package aside from the main unit:

- 1 Operating Instructions
- 2 Remote Controller (RC-178)
- 3 RCP/AM Batteries

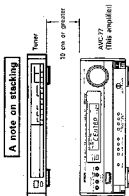
## 3 BEFORE USING

- Read the following cautions carefully before using the amplifier.
- Moving the set
  - Be sure to unplug the power cord and disconnect other cords connecting the amplifier to other audio units before moving the amplifier to prevent damaging or short-circuiting the set.
- Before turning on the power switch
  - Check again to make sure that all connections are correct and that there are no problems with the connection cords.
  - Be sure to turn the power STANDBY before disconnecting or connecting cords.

## 4 INSTALLATION PRECAUTIONS

Using this amplifier or other electronic equipment simultaneously with a tuner or TV may result in noise in the sound or picture.

- Install the amplifier as far as possible from the tuner or TV if this should happen, take the following steps:
- Keep the antenna lines of the tuner or TV as far as possible from the amplifier's power cord and connection cables.
- This problem is especially frequent when using indoor antennas or 300 Ω ohm leader lines. We recommend using outdoor antennas and 75 Ω ohm coaxial cables.



For cooling purposes, do not place another AV component directly on top of the amplifier. Be sure to leave a space of at least 10 cm.

## 5 HANDLING PRECAUTIONS

Switching the input function when the input jacks are unconnected. Switching the input function when a component is not connected to the input jacks may result in the generation of click noise. If this should happen, turn down the MASTER VOLUME or connect a component to the input jacks.

### Playback with Dolby Pro Logic

The Dolby Pro Logic position provides optimum effectiveness for sources recorded with Dolby Surround. A different surround mode should be selected when playing back sources other than this type. Note in particular that when playing back monoaural recording sources, the bypass mode or the simulated mode should be used. Other modes will not provide a suitable effect.

### Muting of the LINE OUT jacks

An electronic muting circuit has been connected to the LINE OUT jacks. This circuit greatly attenuates the output signal for approximately 8 seconds after the power has been switched on. Raising the volume during this operation will result in an extremely large output once the muting has ended, so volume adjustments should be made only after the completion of muting.

### Room output level while in the surround mode

The rear level will seem small for sources other than Dolby Surround sources. The reason for this is that a rear playback signal is not contained in the sources. When playing back such sources with a surround function, the mode should be set to Dolby Surround. The rear level will seem small for sources other than Dolby Surround. The reason for this is that a rear playback signal, even Dolby Surround sources.

### Opening and closing the door

This amplifier is equipped with a door on the front panel. Press the "PUSH OPEN" position printed at the upper right edge of the door to release and open the door. Unwind, to close the door, press in the arms around until a click sound is heard.

NOTE:  
The door will open naturally once it has been released, but it may stop before fully opening. This is not a fault; just lightly push the door open.

## 6 CONNECTIONS

### Connecting video decks (VCR)

Connections for video input and output.  
Connect the video deck's video output jack to the amplifier's VCR IN jack (yellow) and the video deck's video input jack to the amplifier's VCR OUT jack (yellow) using 75  $\Omega$  ohm video coaxial cable pinning cords.

### Connecting the audio input and output jacks

• Connect the video deck's audio output jacks to the amplifier's [AUDIO] VCR IN jacks and the video deck's audio input jacks to the amplifier's [AUDIO] VCR OUT jacks using pinning cords.

### Connecting a video disc player (VDP)

• Connect the video disc player's video output jack to the amplifier's VIDEO VDP (yellow) jack using a 75  $\Omega$  ohm video coaxial cable pinning cord.  
• Connect the video disc player's audio output jacks to the amplifier's AUDIO VDP INPUT jacks using pinning cords.

### Connecting a monitor TV

• Connect the TV's video input jack to the amplifier's VIDEO MONITOR OUT jack using a 75  $\Omega$  ohm video coaxial cable pinning cord.

### Connecting the speaker systems

• A total of three speakers can be connected to the AVC-77, including a pair of rear speakers and one center speaker.  
• The speakers must be connected to the speaker system, making sure that the polarity is correct. The speakers are marked with (+) and (-) signs. Make sure the speakers are connected to the correct round, center orientation of the speaker terminal, and the sense of the speaker's sound field being maintained.  
• When connecting the speakers, make sure that the individual conductors in the speaker cord are in contact with adjacent speaker cord terminals in contact with adjacent speaker cord terminals, or with the rear panel.

### Speaker impedance

• The impedances of the front and rear speakers should be 8  $\Omega$  ohms.  
• Use of a speaker with an impedance other than 8  $\Omega$  ohms may cause distortion, and cause a breakdown.

### Power cord

• Do not plug in the power cord until all connections have been completed.  
• Be sure to connect the left and right channels properly (left with left, right with right).  
• Do not connect the power cord to the power source until all connections have been completed.  
• Note that blocking pin plug cords together with power cords or plugging them near a power transformer will result in the introduction of hum or other noise.  
• Precautions when connecting speakers  
The speaker system for the left channel taken from the front (left) and right channels should be connected to the right channel should be connected to the right channel.

### Connecting the speaker systems

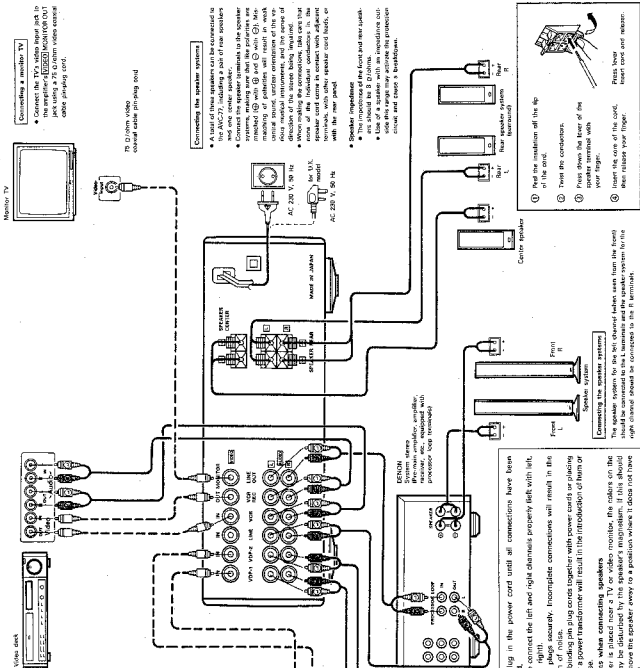
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## 7 DOLBY PRO LOGIC SURROUND

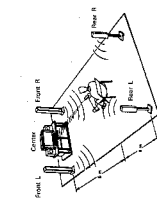
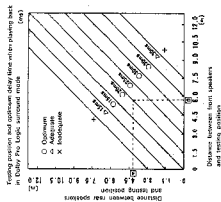
### • Setting delay times

Delay time, the time delay between the listening position and the speakers, depends on the listening position. Look at the diagram on the right and set the optimum delay time for the size of your room and your listening position. For example, if your listening position is 4 m away from the front speakers and 4 m away from the rear speakers, the optimum delay time will be 20 msec. The variation range of the delay time differs from one mode to another.

For more information on the delay time variation range, see page 7.

### • Adjusting the input balance

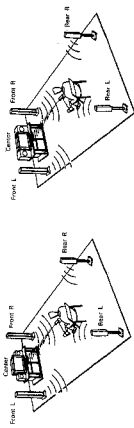
This amplifier is equipped with an auto input balance circuit, so there is no input balance adjustment knob.



The ON/OFF and delay time setting for the speaker output (FRONT, REAR, CENTER) is important for the rear and center speakers can be set individually for each surround mode.

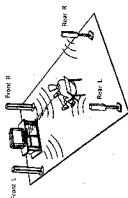
### • Speaker placements in Dolby Pro Logic surround mode

When playing back a Dolby Pro Logic Surround, use of a center speaker will provide the best effect.



### Normal mode

This is the best mode to use if the center channel is smaller than the speakers on the left and right. Signals of 100 Hz or below, which has almost no effect on orientation, are divided between the left and right channels, so the bass on the left and right channels is deeper.



### Phantom mode

This is the mode to use when the center channel playback speaker is not in use. The center channel signal is divided between the left and right channels, so that you can enjoy an exciting sound field even without using the center speaker.

### • Test tone

The test tone produces a test signal for adjusting the level in each channel in the Dolby Pro Logic surround mode. Before using Dolby Pro Logic surround, position the speakers as follows. First, set the level balance for the volume of each speaker, and then adjust the volume etc. so that they sound as if they are at the same level.

### Wide mode

This is the best mode to use when the center channel speaker is of the same grade as the speakers on the left and right. The entire frequency band, from low regions to high regions, is sent to the center channel speaker, giving an exciting sound field for your enjoyment.



In normal and wide mode, the test tone switches in the following order:

Front left → Center → Front right → Rear

Adjust the volume balance using this signal until the optimum balance is reached.

In phantom mode the switching is as follows:

Front left → Front right → Rear

Note that on this amplifier, the test tone is produced every 4 seconds after the first 2 seconds.

Use the remote control unit (RC-178) to make adjustments using the test tone.

## 8 PART NAMES AND FUNCTIONS

### Front panel

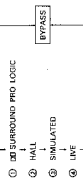
#### 1 POWER switch

- **ON** When this switch is pressed once, the power turns on. Press it again to turn the power off. The muting control is activated while "MUTING" is flashing to prevent noise when the POWER switch is operated. After several seconds the muting circuit turns off, the "MUTING" indicator turns off and the unit is in the normal operating mode.
- **STANDBY** Press the switch once again to set the standby mode. "OFF" is displayed on the LCD.

#### 2 SURROUND buttons

- **BYPASS** button Press this button to select the surround mode.
- When this button is pressed, the surround mode is bypassed and the normal stereo sound is produced.
- No signals are output to the rear channel.
- **MODE selector button** Press this button to select one of the surround modes shown below.

Order of priority



#### ① 3D SURROUND PRO LOGIC

Use this mode for video software, etc., recorded in Dolby Surround.

Select the center mode according to the speaker position of the speakers.  
Set the delay time to between 15 msec and 30 msec, according to the size of the room and the position of the speakers.

#### ② HALL atmosphere

Use this mode to create the atmosphere of a hall.

The delay time can be set to between 5 msec and 30 msec.

#### ③ SIMULATED

No signals are output to the center channel.

Use this mode to create a surround effect with monaural sources.

No signals are output to the center channel.

The delay time can be set to between 5 msec and 30 msec.

#### ④ LINE

Use this to create the atmosphere of a live program in a studio.

The delay time is set at 0 msec.

#### 3 PANEL buttons

When this button is pressed, the current settings are displayed on the LCD.

For details, refer to pages 7 to 8.

#### 4 REMOTE SENSOR

The remote control unit is pointed toward this sensor and operated.

#### 5 LCD liquid crystal display

The surround mode and input and output information is displayed here when the power is turned on. The volume level is also displayed. When the BYPASS button is pressed, a display pertaining to that button is shown for approximately 5 seconds, after which the surround mode is once again displayed.

Refer to page 8 for details on the LCD indicators.

#### 6 MASTER VOLUME control

Turn the control clockwise (↻) to increase the volume, counterclockwise (↻) to decrease it.

#### 7 OUTPUT BALANCE control

Use this to adjust the balance between the left and right outputs to create an effective surround sound.

#### 8 REAR SPEAKER VOLUME control buttons

Use these to adjust the volume of the rear (surround) speakers.

• **UP:** Press this to increase the volume.

• **DOWN:** Press this to decrease the volume.

The volume changes while one of the buttons is pressed. The volume change is displayed on the LCD.

These buttons do not function when in the bypass mode.

#### 9 CENTER SPEAKER VOLUME control buttons

• **UP:** Press this to increase the volume.

• **DOWN:** Press this to decrease the volume.

The volume changes while one of the buttons is pressed, and stops changing when the button is released. The volume change is displayed on the LCD.

These buttons do not function when in the hall, live, simulated or Dolby Pro Logic pattern modes.

#### 10 Input selector buttons

Use these buttons to select the input audio and video signals.

• **VDP-1:** Press this to use the VDP connected to the VDP-1 jacks.

• **VDP-2:** Press this to use the VDP connected to the VDP-2 jacks.

• **VCR:** Press this to use the video deck connected to the VCR jacks.

• **LINE:** Press this when an amplifier or receiver equipped with processor loop terminals is connected to select that component.

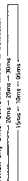
#### 11 DELAY selector button

Press this button to switch the delay time, as shown below.

• When Dolby Pro Logic is selected with the SURROUND MODE button:



• When any other surround mode is selected:



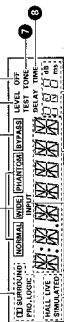
#### 12 TRAP DOOR

Press the right edge to open the door.

To reproduce the trap door sound, a kick is heard to indicate that the door is closed.



## Explanation of the LCD



- Multi-function display**  
The following things are displayed in order each time the POWER switch is pressed:  
1. SURROUND MODE  
2. BYPASS  
3. CENTER LEVEL  
4. REAR LEVEL  
5. MUTE  
6. OFF  
7. INPUT  
8. DELAY TIME  
9. 20ms  
10. 20ms  
11. 20ms  
12. 20ms
- Surround PRO LOGIC indicator**  
This is displayed when the SURROUND PRO LOGIC mode is selected and the SURROUND MODE button is pressed.
- NORMAL, PHANTOM and WIDE indicators**  
These light in the following order:  
— NORMAL — PHANTOM — WIDE
- BYPASS indicator**  
This lights when the surround circuit is bypassed by pressing the SURROUND BYPASS button.
- LEVEL indicator**  
This lights when the level setting is set by the REAR UP and REAR DOWN buttons are pressed. Adjust the level with the UP and DOWN buttons while watching the display in section 6.  
The level is displayed in steps of 2dB from -48dB (minimum) to 0dB (maximum).
- OFF indicator**  
This lights when the standby mode is set by turning off the POWER switch.
- TEST TONE indicator**  
This lights when the TEST TONE button is pressed (RC-77H).  
Refer to page 10 for details.
- DELAY TIME indicator**  
This lights along with section 6 when in the surround mode. Use the DELAY button to set the delay time.

DELAY PRO LOGIC	Displayed in 5 steps from 10ms to 30ms.
HALL and SIMULATED	Displayed in 5 steps from 0dB to 30dB.
LEVEL	Fixed at 0dB.

## Examples of Multi Function Display Patterns

The displayed modes indicate the operations performed when the buttons on the front panel of the AVC-77 or on the remote control unit (RC-17H) are operated.

- Surround mode display**  
(1) **Delay Pro Logic modes**  
— SURROUND PRO LOGIC —  
Press the **DELAY** button:  
— NORMAL, PHANTOM, or WIDE —  
— DELAY TIME —  
— 20ms —  
— 20ms —  
— 20ms —  
— 20ms —  
(2) **Other surround modes**  
— The surround mode is displayed as follows:  
— HALL or SIMULATED — Displayed in 5 steps from 0dB to 30dB.  
— LIVE — Fixed at 0dB.  
(3) **BYPASS indicator**  
— Displayed in the bypass mode.
- Center level display**  
— Displayed when CENTER UP or DOWN button is pressed.  
— Displayed in steps of 2dB from -48dB (minimum) to 0dB (maximum).
- Rear level display**  
— Displayed when REAR UP or DOWN button is pressed.  
— Displayed in steps of 2dB from -48dB (minimum) to 0dB (maximum).
- INPUT indicator**  
— The function selected with the input selector buttons is displayed.
- MUTING display**  
— This appears when the POWER switch is turned on. "MUTING" flashes until the muting circuit turns off.
- OFF indicator**  
— This appears when the POWER switch is turned off.

## 9 OPERATION

### PREPARATIONS FOR PLAYBACK

1. Checking connections
  - Check the connection diagrams (pages 5 to 10), and make sure that all connections are correct.
  - Check that the left and right speaker systems and the pairants (10, 11) are matched correctly.
  - Set the OUTPUT BALANCE control knob in the center position.
  - Set left and right with right.
  - Check that all cables are securely plugged in.
  - Check that the cables used are of the correct type.
2. Checking all level positions
  - For numbers, see pages 7 to 8.
  - Put the MASTER VOLUME control knob in the 0 position by turning it as far to the left as it will go.
  - Set the OUTPUT BALANCE control knob in the center position.

After making these checks, turn on the power by pressing the POWER switch.  
The "MUTING" indicator flashes on the LCD, then turns off after several seconds, at which point the set is in the normal operating mode.

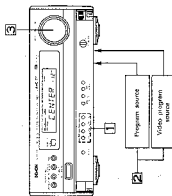
#### Note on operations carried out during playback

If the FUNCTION buttons or other buttons are operated during playback, the sound will be interrupted. This is due to the activation of the muting circuit which prevents the generation of noise during switching. It is not a malfunction.

#### Protection circuit ("PROTECTION" display lights)

The purpose of this circuit is to prevent the internal circuit being damaged by the large currents which flow through the inner circuitry of the set when output is sent to a partly disconnected or short-circuited speaker terminal. When the protection circuit is activated, the speaker output is automatically cut off, and the message "PROTECTION" is displayed. In this situation, be sure to unplug the amplifier power cord and to check the speaker connections before plugging the power cord back in and resuming the program. If the PROTECTION message is still displayed after you have rechecked, contact your dealer or your local Sales Office or Brandt Office.

### 1. Program source playback



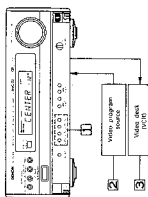
- 1 Press the desired FUNCTION button. The function for the button which was pressed is indicated on the LCD.

Program source	FUNCTION Button
To watch and listen to the pictures and sound from a video disc player connected to the VIDEO IN jack	VDP-1
To watch and listen to the pictures and sound of the video disc player connected to the VIDEO IN jack	VDP-2
To watch and listen to the pictures and sound from a video disc player connected to the VIDEO IN jack	VCR
To watch and listen to the pictures and sound from the amplifier or video disc player connected to the VIDEO IN jack	LINE

- 2 Start playback of the program source. For operating instructions, consult the operating instructions for the relevant components.

- 3 Adjust volume.

2. Recording a video program source or making a video copy
  - To record or copy the video source currently monitored.



- 1 Press the desired FUNCTION button. The function for the button which was pressed is indicated on the LCD.

Video program source	FUNCTION Button
To record from a video disc player connected to the VIDEO IN jack	VDP-1
To record from a video disc player connected to the VIDEO IN jack	VDP-2
To record the video from the amplifier or video disc player connected to the VIDEO IN jack	LINE

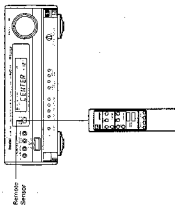
- 2 Start playback of the desired video program source.
- 3 Start recording on the video deck. For instructions, consult the operating instructions of the components concerned.

## 10 REMOTE CONTROL UNIT

Following the procedure outlined below, insert the batteries before using the remote control unit.

## Range of operation of the remote control unit


Point the remote control unit at the remote control sensor as shown on the diagram at the left.



## NOTES:

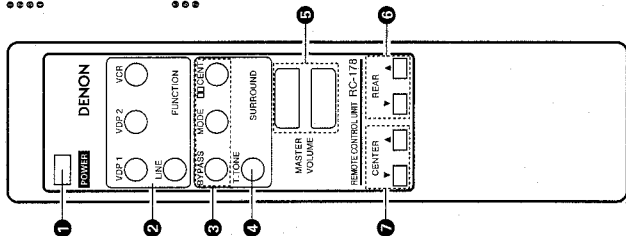
- The remote control unit can be used from a straight distance of approximately 7 meters, but this distance will shorten or operation will become difficult if there are obstacles between the remote control unit and the remote control sensor. If the remote control sensor is exposed to direct sunlight or other strong light, or if operated from an angle.
- Neon signs or other devices emitting pulse-type noise may result in malfunction, so keep the set as far away from such devices as possible.

**Inserting the batteries**

- 
1. Open the bottom cover of the remote control unit and remove the battery cover.



### Button Layout



- POWER button**
- FUNCTION button**
- SURROUND MODE button**
- TUNE button**
- The receiver will send signals for adjusting the level of the different channels in the Dolby Pro Logic Surround mode.
- Before playing software recorded in Dolby Pro Logic Surround position the speakers, then use the tune tones to adjust the balance between the volume of the front and rear speakers. The tone levels can be adjusted in the normal and wide modes. The test tones are emitted in the following order:
- |                  |              |                   |            |
|------------------|--------------|-------------------|------------|
| _____ Front left | _____ Center | _____ Front right | _____ Rear |
|------------------|--------------|-------------------|------------|
- The test tones are cancelled when this function is pressed again.
- MASTER VOLUME button**
- This button allows you to control the master volume of the system and the individual loudspeakers.

## 11 SPECIFICATIONS

### Audio section

Rated maximum output  
30 W (8  $\Omega$  ohms, 1 kHz with 1.0% THD)  
REAR (rear 2ch drive)  
15 W (8  $\Omega$  ohms, 1 kHz with 1.0% THD)  
40 Hz to 20 kHz  $\pm 3$  dB  
Rated input/output impedance  
16  $\Omega$  mV/17 k $\Omega$ /16  $\Omega$   
S/N ratio  
90 dB

### Speaker impedance

Center: 8  $\Omega$  ohms  
Rear: 8  $\Omega$  ohms  
150 mV/17 k $\Omega$  ohms

### Video section

Input and output level/impedance  
Frequency response  
1.0p-2175  $\Omega$  ohms  
2 Hz to 8 MHz  $\pm 0.5$  dB

### General

Power source  
AC 230 V, 50 Hz  
Power consumption  
135 W  
Maximum external dimensions  
220 (W)  $\times$  96 (H)  $\times$  213 (D) mm  
(8.7  $\times$  3.8  $\times$  8.4 in.)  
Weight  
4.2 kg (10 lbs 6 oz)

### Remote control unit (RC-178)

Remote control system  
Infrared pulse  
Two DC 1.5V R6P7/AA batteries  
Maximum external dimensions  
48 (W)  $\times$  176 (H)  $\times$  18 (D) mm  
(1.9  $\times$  7.0  $\times$  0.7 in.)  
Weight  
120g (measuring batteries) (Approx. 4 oz)

### Maximum dimensions include controls, jacks, and covers.

(W) = width, (H) = height, (D) = depth

\* Specifications are subject to change without notice.

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## 12 TROUBLESHOOTING

Check these points before you conclude that the amplifier has developed a fault.

- Are the speakers correctly connected as described in the operating instructions?
  - Are you operating the equipment properly, as described in the operating instructions?
  - Are the speakers, turntable, CD players or other components connected properly?
- If the unit does not work properly, make the checks described in the table below. If the fault is not covered in this table, the amplifier has probably developed a fault, and you should switch off the power immediately and contact your dealer or your nearest DENON Service Center or dealership.

Problem	Cause	Measures	Page
Although the power has been switched on, the LCD is lit up, but no sound is produced.	• Power cord plug is not securely plugged in.	• Check that power cord plug is properly plugged in.	5
LCD is lit up, but no sound is produced.	• Speaker and its not securely connected to the speaker cable. • Volume setting is not correct. • Balance adjustment knob is turned all the way down.	• Connect speaker cord securely. • Turn volume knob to its maximum position. • Turn volume knob up to a suitable level.	5 7 7
LCD keeps flashing.	• Speaker jack has short-circuited.	• Turn off power switch, connect speakers securely, then turn power switch back on.	5
Sound only comes out on one side.	• Speaker cord is not securely connected. • Input and output cords are not properly connected. • Left and right sides are not properly connected.	• Connect speaker cords securely. • Connect input and output cords accurately. • Adjust balance to suitable level (refer to basic control knob).	5 5 7-8
Using stereo playback, the sound of the recorded programme is not reproduced.	• Left and right speaker cords are not properly connected. • Left and right sides are not properly connected. • Stereo mode is not selected.	• Connect speaker cords accurately. • Adjust balance to suitable level (refer to basic control knob). • Reverse connections.	5 5 5
When the problem occurs during CD and during the fast-forward and reverse operations.	• Batteries have run down.	• Replace batteries.	5
Remote control unit does not operate properly after operation.	• Remote control unit is too far away from the amplifier. • Something is blocking the way between the remote control unit and the amplifier. • The batteries have been inserted with + and - ends wrong way round.	• Bring the remote control unit nearer to the amplifier. • Remove whatever is in the way. • Press the control button. • Take the batteries out and re-insert them in the right way round.	— — — —
When the problem occurs during CD display.	• Speaker cords are not securely connected.	• Turn off power, connect speaker cords accurately, and turn power switch on.	8

## 13 LAST FUNCTION MEMORY

- This amplifier has a Last Function Memory which stores the input and output state immediately before the power is switched off.
- Because of this function, even when the power has been switched off, the memory is stored for about 3 days, so when the power is switched on again, there is no need to carry out complicated settings again.